

## **WEB-BASED ACCOUNT MANAGEMENT**

This application is a continuation-in-part of pending U.S. Patent Application 09/567,589, filed May 10, 2000, which claims the benefit of U.S. Provisional Patent Application Serial No. 60/133,687,  
5 filed May 10, 1999.

## **BACKGROUND OF THE INVENTION**

The present invention relates to an account management system for Internet commerce applications and, more particularly, to a system for qualifying over the Internet a participant in a transaction.

10 An unfortunate result of the increasing market in electronic commerce over the Internet is the increasing occurrences of fraud and/or abuse. Such abuse has been particularly evident on Internet auction sites, of which there are over 1,000 currently operating today. A majority of the abuse has been either individuals bidding on items  
15 for sale without the intention of ever taking possession of the items or individuals who intentionally bid on items with the intention of taking possession of the items without paying for them.

It would thus be desirable to provide an intermediary or third-party participant that can provide an Internet account/credit  
20 management system to eliminate the potential for fraud or abuse. Such a system should be able to determine with some certainty that the individual who has registered on the site has funds available, which can be reserved as a deposit for the item or to cover the cost of

the item if the bidder submits a winning bid. It would also be desirable for the system to enable funds to be transferred between bidder and seller accounts at settlement.

Another problem that has arisen from the increased commerce  
5 over the Internet is vendor inability to qualify or validate customer funds for e-commerce transactions. Customers such as individuals or businesses or the like may enter transactions without sufficient funds or credit, resulting in a failed transaction. Moreover, even customers with apparently sufficient credit may enter transactions knowing that  
10 the a deposit or purchase amount of available funds/credit is already encumbered.

It would thus be desirable to provide an intermediary or third-party participant that can provide an Internet account/credit management system that can qualify transaction participants or verify  
15 that sufficient funds are available and unencumbered to complete the transaction.

### **SUMMARY OF THE INVENTION**

The system according to the present invention enables an auction company to provide a secure way of preventing fraudulent  
20 bidding and preventing participation by bidders that fail to settle after winning an auction and enables a business to qualify customers that enter transactions. The system is preferably an Internet web site that serves to electronically transact the acceptance and verification of deposits from multiple auctions or transactions and participants

simultaneously. The system provides an easy to use and efficient method for minimizing fraudulent bidding in multiple auctions simultaneously and fraudulent or unqualified entering of transactions while being capable of providing insured (such as FDIC) interest bearing deposits held for bidders. The system incorporates a secure web site capable of communicating with numerous entities and tracking multiple deposit accounts for participants in a commerce environment simultaneously.

Participants are required to establish a deposit or margin account, a so-called bidder or consumer funding account, prior to their being able to bid or otherwise enter a transaction. When the bidder desires to enter a transaction, the auction venue or business venue computer queries the system to determine whether the participant has an account. If not, the participant is provided an opportunity to sign up for an account.

When listing an asset for sale, a seller is prompted to indicate whether a deposit is required, and if so, the amount of the required deposit. The sellers or the auction venue determine the amount of the deposit according to various factors, including the fact that higher deposit amounts result in a smaller number of qualified participants, but also result in more qualified participants. Moreover, the seller or the auction venue considers what amount of money would adequately compensate the seller in the event that the participant does not complete settlement. A suggested deposit amount may also be calculated automatically.

If a deposit is required to participate in the transaction, the venue transmits information to the deposit system relating to the amount of a required deposit. The system then puts a deposit hold on the participant's funding account for the amount of that transaction's deposit.

During the transaction, if the bidder is a high bidder or if the customer desires to complete a purchase, an appropriate additional amount may be held or reserved in the participant's funding account. The additional hold is only in place as long as the bidder is the high bidder or the participant proceeds to complete the transaction. The holds are released in the event that the bidder is no longer the high bidder or the transaction is canceled. In the case of auctions, each time the participant is a high bidder in a particular auction, a deposit hold is placed on the funding account along with a bid hold, allowing the bidder the ability to bid on multiple auctions requiring deposit holds simultaneously up to the available balance of the funding account. Preferably, the deposit holds cannot exceed a balance in the funding account.

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### **BRIEF DESCRIPTION OF THE DRAWINGS**

These and other aspects and advantages of the present invention will be described in detail with reference to the accompanying drawings, in which:

FIGURE 1 is a detailed schematic illustration of a computer system;

FIGURE 2 illustrates the system environment and application;

FIGURE 3 illustrates the site architecture according to the  
5 present invention; and

FIGURE 4 is a flow diagram illustrating an auction process incorporating the system of the present invention.

### **DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS**

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The account management system implemented in the diagrams  
10 of FIGURES 2-4 is preferably a browser-based system in which a  
program running on a user's computer (the user's web browser)  
requests information from a server program running on a system  
server. The system server sends the requested data back to the  
browser program and the browser program then interprets and  
15 displays the data on the user's computer screen. The process is as  
follows:

1. The user runs a web browser program on his/her  
computer.
2. The user connects to the server computer (e.g., via the  
20 Internet). Connection to the server computer may be conditioned  
upon the correct entry of a password as is well known.
3. The user requests a page from the server computer. The  
user's browser sends a message to the server computer that includes  
the following:

the transfer protocol (e.g., http://); and

the address, or Uniform Resource Locator (URL).

4. The server computer receives the user's request and retrieves the requested page, which is composed, for example, in HTML (Hypertext Markup Language).
  5. The server then transmits the requested page to the user's computer.
  6. The user's browser program receives the HTML text and displays its interpretation of the requested page.
- 10 Thus, the browser program on the user's computer sends requests and receives the data needed to display the HTML page on the user's computer screen. This includes the HTML file itself plus any graphic, sound and/or video files mentioned in it. Once the data is retrieved, the browser formats the data and displays the data on the
- 15 user's computer screen. Helper applications, plug-ins, and enhancements such as Java™ enable the browser, among other things, to play sound and/or display video inserted in the HTML file. The fonts installed on the user's computer and the display preferences in the browser used by the user determine how the text is formatted.
- 20 If the user has requested an action that requires running a program (e.g., a search), the server loads and runs the program. This process usually creates a custom HTML page "on the fly" that contains the results of the program's action (e.g., the search results), and then sends those results back to the browser.

Browser programs suitable for use in connection with the account management system of the present invention include Netscape® Navigator available from Netscape® Communications Corporation and Internet Explorer available from Microsoft® Corp.

5 While the above description contemplates that each user has a computer running a web browser, it will be appreciated that more than one user could use a particular computer terminal or that a "kiosk" at a central location (e.g., a cafeteria, a break area, etc.) with access to the system server could be provided.

10 It will be recognized by those in the art that various tools are readily available to create web pages for accessing data stored on a server and that such tools may be used to develop and implement the account management system described below and illustrated in the accompanying drawings.

15 FIGURE 1 generally illustrates a computer system 201 suitable for use as the client and server components of the account management system. It will be appreciated that the client and server computers will run appropriate software and that the client and server computers may be somewhat differently configured with respect to  
20 the processing power of their respective processors and with respect to the amount of memory used. Computer system 201 includes a processing unit 203 and a system memory 205. A system bus 207 couples various system components including system memory 205 to processing unit 203. System bus 207 may be any of several types of  
25 bus structures including a memory bus or memory controller, a

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A number of program modules may be stored on the hard disk 211, removable magnetic disk 215, optical disk 219 and/or ROM 252 and/or RAM 254 of the system memory 205. Such program modules may include an operating system providing graphics and sound APIs, one or more application programs, other program modules, and program data. A user may enter commands and information into computer system 201 through input devices such as a keyboard 227 and a pointing device 229. Other input devices may include a microphone, joystick, game controller, satellite dish, scanner, or the like. These and other input devices are often connected to the processing unit 203 through a serial port interface 231 that is coupled to the system bus 207, but may be connected by other interfaces, such as a parallel port interface or a universal serial bus (USB). A monitor 233 or other type of display device is also connected to system bus 207 via an interface, such as a video adapter 235.

The computer system 201 may also include a modem 254 or other means for establishing communications over the wide area network 252, such as the Internet. The modem 254, which may be internal or external, is connected to the system bus 207 via the serial port interface 231. A network interface 256 may also be provided for allowing the computer system 201 to communicate with a remote computing device 250 via a local area network 258 (or such communication may be via the wide area network 252 or other communications path such as dial-up or other communications means). The computer system 201 will typically include other

peripheral output devices, such as printers and other standard peripheral devices.

As will be understood by those familiar with web-based forms and screens, users may make menu selections by pointing-and-clicking using a mouse, trackball or other pointing device, or by using the TAB and ENTER keys on a keyboard. For example, menu selections may be highlighted by positioning the cursor on the selections using a mouse or by using the TAB key. The mouse may be left-clicked to select the selection or the ENTER key may be pressed. Other selection mechanisms including voice-recognition systems, touch-sensitive screens, etc. may be used and the invention is not limited in this respect.

The site architecture and system method will be described with reference to FIGURES 2-4. Generally, an auction company or Internet auction venue can implement the system according to the present invention to require its users (i.e., bidders and sellers) to establish a management account, a so-called bidder funding account, and process all auctions through the system according to the present invention. As shown in FIGURE 2, the eDEPOSIT™ system of the invention serves as an intermediary between sellers and bidders participating in an auction over the Internet, and between the Internet auction site and the participants (sellers and bidders) in an auction. The system establishes and maintains bidder funding accounts to ensure sellers that bidder funds are available for any required deposits and bid amounts. The Internet auction site enlists the system to

require bidders to maintain a bidder funding account, and the system tracks each bid of every auction simultaneously.

The process of establishing an account will be described with reference to FIGURE 3. At the system home page 12, the user can  
5 access a login/set-up area 14, a Frequently Asked Questions area 16, a User Guide 18, or an informational area including company information 20, Customer Service 22 and a Help area 24.

Account maintenance and set-up are effected via the link at 14. To establish an account, the user is prompted to complete a  
10 registration form via a link 26. The registration form will include personal and financial information about the user including, for example, name, address, phone number, e-mail address, social security number, etc. Once completed, the user selects a user ID and password and is assigned an account number. The link 26 can also be  
15 accessed to enable the user to edit the user profile.

The user can deposit funds via a link 28 by any suitable means, including cashier's/certified check, online check, virtual check, credit card payment, bank wire, e-mail or the like. Funds are deposited into  
a system server bank account (such as an insured account) and  
20 tracked through the server database. Users can track and monitor their account at any time via a link 30 to determine an amount of interest earned or the status of holds on the account. All such holds or reservations are effected via the system computer and do not affect the interest rates for each account. Bidders may deposit or withdraw  
25 their money at any time but may only withdraw up to the non-held

amounts in the account. Withdrawal requests are made via a link 32. Bidders may also have the option of designating funds for certificates of deposits, where they agree to keep their funds in the account for a specified period of time for specific rates of return.

- 5           A balance in the bidder funding account can be an amount of unreserved funds deposited in the bidder funding account and/or an amount of unreserved credit in the bidder funding account according to an approved line of credit provided to the user. In this context, portions of a credit line are reserved via an "authorization hold,"
- 10   which is enabled according to known credit card-type issuers and processors. The authorization hold may draw on the credit line when an auction is complete or, when a deposit is required, when the bidder does not complete settlement after being a high bidder. The authorization hold serves to reserve a portion of the credit line. When
- 15   the bidder is no longer the high bidder, the authorization hold is released. The authorization hold can also act as an escrow service to hold transfer of funds until the items ordered have been accepted or delivered to the bidder.

- The line of credit function can be effected via a bank card
- 20   issuing company that currently provides credit such as through the Internet or by the system source. The system, through a link with the bank card issuing company, can determine if the credit line is sufficient to place an authorization hold on the line of credit and to reverse the authorization hold when the line of credit is not needed.
- 25   An auction venue (or other business that requires a deposit) will

Registered bidders apply for the credit facility just as they would apply for a credit card, but through the bank card issuing companies. Just as with applying for a credit card, the applicant may request a line of credit, and the issuing company, based on the credit-worthiness of the applicant, can either issue that line of credit or reject the requested line of credit and issue either a lesser amount or none at all. The credit line determination can be immediate, and if accepted, the registered bidder would immediately receive an identification number with or without an actual system credit card.

An auction process including an implementation of the present invention will be described with reference to FIGURE 4. Although the invention is described in accordance with an application to an auction process, the system could readily be implemented into any

transaction where qualification is desirable. Thus, the term "auction" as used herein means any transaction between parties where qualification of one or more of the parties is desirable. In this context, the term "bidder" as used herein refers to any participant in the transaction that is being qualified with the system according to the invention, including, but not limited to, buyers, sellers, vendors, service providers, and the like.

A bid is initially placed by a bidder at an auction venue in step S1. If the auction venue does not incorporate the system according to the present invention (NO in step S2), the auction proceeds normally as is conventional, subject to potential fraud or abuse. If the auction venue has implemented the system according to the present invention (YES in step S2), the system determines in step S3 whether the bidder has a bidder funding account. If not (NO in step S3), the user is given an opportunity to open an account in step S4. If the user does not desire to open an account (NO in step S4), the user is provided with an indication that bids cannot be made at this venue without a bidder funding account (step S5), and the user is returned to the auction venue home page at step S1. If the user desires to open an account (YES in step S4), the user is directed to the system home page where account information can be gathered and an account can be established as described above with reference to FIGURE 3 (step S6). The system then returns the user to step S3 to determine whether the user has a valid account.

- If the user has successfully established a bidder funding account or the user had previously established an account (YES in step S3), in step S7, the system determines whether sufficient funds are available to proceed with the auction in step S7. In the event that
- 5 sufficient funds are not available (NO in step S7), an indication is provided to the user, and the user is prompted to deposit more funds in their bidder funding account (step S8). The funds may be deposited by cashier's/certified check, online check, virtual check, credit card payment, bank wire, e-mail or any other suitable vehicle.
- 10 If additional funds are not deposited (NO in step S9), the bid is declined at step S10, and the system returns the user to the auction venue home page at step S1. If additional funds are deposited (YES in step S9), the system returns the user to step S7 to determine if sufficient funds are available.
- 15 If sufficient funds are available for the user's bid and any required deposit (YES in step S7), the system determines whether the user is a high bidder in step S11. If not (NO in step S11), the user is informed that they are not the high bidder, and any existing bid holds or deposit holds are removed (step S12). The system then returns the
- 20 user to the auction home page at step S1 to place another bid. If the user is the high bidder (YES in step S11), a hold is placed in the bidder's bidder funding account in step S13. That is, if a deposit is required to participate in the auction, a first portion of the bidder's bidder funding account is reserved corresponding to an amount of the
- 25 deposit. In one operating mode, a second portion of the bidder's





system that the transaction did not settle and demand forfeiture of the deposit. Once the seller demand has been received, the bidder is notified and given an opportunity to protest the demand. If no protest is received, the system transfers the held funds to the seller. If a

5 protest is received, the seller and bidder are provided an opportunity to resolve the dispute, for example, by arbitration or the like. A similar procedure can be used in the event of seller fault. That is, sellers may also be required to maintain "bidder funding accounts" with seller deposits being reserved during the transaction. If a seller

10 is at fault in a failed transaction, the seller may forfeit the deposit. The deposit hold and the bid hold remain in place, however, until either the transaction is complete or until the dispute is otherwise resolved.

As noted above, the system according to the invention could

15 readily be implemented into any transaction where qualification is desirable, such as between a vendor and its customers (e.g., business entities, individuals or the like). In this context, when a participant desires to purchase a product or otherwise enter a transaction with a

vendor, similar to the auction process described above when the

20 participant is the high bidder, a hold is placed in the participant's consumer funding account as in step S13. If a deposit is required to enter the transaction, a first portion of the funding account is reserved corresponding to an amount of the deposit. If no deposit is required, only a second portion of the funding account corresponding to

25 transaction costs may be reserved. This function is similar to a letter

of credit or buyer qualification or the like for potential buyers. The system assures the vendor that identified buyers have met deposit requirements.

When it is determined that the transaction is complete, as in  
5 step S14, the purchase is accepted. Subsequently, the held funds can be transferred to the vendor directly from the funding account or alternative arrangements can be made as discussed above.

The system according to the invention exploits the impartiality of the Internet, providing an objective intermediary between  
10 transaction participants to ensure, for example, that bidders are qualified to participate in an auction. The account maintenance system is also suitable for online transactions such as retail consumer products and the like and off-line transactions, for example, transactions requiring a deposit or other financial qualification. By  
15 ensuring that funds are available, the system according to the invention significantly reduces or eliminates fraud and abuse in e-commerce transactions.

While the invention has been described in connection with what is presently considered to be the most practical and preferred  
20 embodiments, it is to be understood that the invention is not to be limited to the disclosed embodiments, but on the contrary, is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims.